

REMARKS

Claims 1-32 are in the application. Claims 9, 11, 12, and 17-32 are withdrawn from consideration, and claims 1-8, 10, and 13-16 are rejected. By the present amendment claims 2, 7-9, 11, 12, 14-16, 19, 21-25, and 28-32 are hereby canceled without prejudice or disclaimer, and claims 1, 4, 5, 6, 10, 13, 18, 20, 26, and 27 are hereby amended. As the amendments are fully supported by the specification, the amendment adds no new matter.

By the present amendment, the specification is amended to correct typographical errors, to change the format of the sequence identifiers, and to indicate trademarks, as requested by the Patent Office. The abstract is also amended to remove the term "hereinafter", to correct typographical errors, to add a sequence identifier to the sequence disclosed in the abstract, and to not exceed 150 words in length, as requested by the Patent Office.

Applicants, are also filing an amended sequence listing with this Amendment. The sequence listing has been amended to add two sequences that were disclosed in Table 1 of the originally filed application, but were inadvertently omitted from the sequence listing. The sequences in the attached paper copy and computer readable form of the amended sequence listing are the same and add no new matter.

In view of the amendments, reconsideration of claims 1, 3-6, 10 and 13 and rejoinder and reconsideration of claims 17, 18, 20, 26 and 27 are respectfully requested.

§ 112 Rejections

Claims 1-8, 10, and 13-16 are rejected under 35 USC §112, second paragraph as being indefinite.

Claims 2, 7-9 and 14-16 have been canceled rendering the rejection of these claims moot. Claims 1 and 13 no longer recite a core motif. Claim 4 has been amended to recite that the binding affinity of the peptide mimetic for the B71 protein is from 10 fold greater to 2 fold less than the binding affinity of CD 28 for the B71 protein. Claim 5 has been amended to recite that the binding affinity of the peptide mimetic for the B71 protein is less than the binding affinity of CTLA-4 for the B71 protein. Claim 13 no longer recites a "biologically active variant" or a "reference" sequence. Applicants submit that 1, 3-6, 10, and 13, as amended, are definite.

Claims 1-8, 10, and 13-16 are rejected under 35 USC §112, first paragraph.

Claims 2, 7-9, and 14-16 have been canceled rendering the rejection of these claims moot. Claim 1 has been amended to recite that the peptide mimetic is 20 to 25 amino acids in length and comprises the 20 amino acid peptide whose sequence is set forth in SEQ ID NO: 5 or SEQ ID NO: 6. Applicant has enabled one of ordinary skill in the art to make and use such peptide. Claims 3-6 depend from claim 1 and are, for the same reasons, also enabled. Claim 10 has been amended to recite a peptide mimetic that is 20 to 21 amino acids in length and comprises SEQ ID NO: 5 or SEQ ID NO: 6, and claim 13, which has been amended to depend from claim 10, recites that the peptide is 20 amino acids in length. Applicants submit that peptide mimetics of both claim 10 and claim 13 are enabled.

§102 Rejections

Claims 1-6, 10, and 13-16 are rejected under 35 USC §102(b) as being anticipated by Srinivasan et al. (1999. reference AK on IDS filed 3/24/2003)(hereinafter "Srinivasan et al.")

Claims 2, 7-9, and 14-16 have been canceled rendering the rejection of these claims moot. To anticipate an invention under Section 102(b), a prior art reference must be enabling and describe the applicant's claimed invention in sufficient detail to have placed it in the possession of a person of ordinary skill in the field of the invention. Although Srinivasan et al. mentions a retro-inverso peptide analog of CD28, Srinivasan et al. does not disclose the sequence of such a peptide analog, or the size of such a peptide analog, or any other feature of the peptide analog that would place such peptide analog in the possession of those of ordinary skill in the art. Lacking such a disclosure, Srinivasan et al. does not enable a peptide mimetic that is 20-25 amino acids in length and that comprises the sequence set forth in SEQ. ID NO: 5 when the peptide mimetic comprises levorotary amino acids or the sequence set forth in SEQ ID NO: 6, when the peptide mimetic comprises dextrorotary amino acids, as recited in claim 1 as amended. Moreover, Srinivasan et al., does not indicate that the peptides recited in amended claims 1, 3-6, 10, and/or 13 of the present application were in public use or on sale more than one year prior to the filing date of the patent application. As a result, Srinivasan et al does not anticipate the

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peptides recited in claims 1, 3-6, 10 and 13 as amended. Accordingly, applicants submit that the rejection of claims 1, 3-6, 10 and 13, as amended should be withdrawn.

Claim 1, 2, 4, 5, and 8 are rejected under 35 USC 102(b) as being anticipated by Linsley et al. (1998, US Patent 5,733,253)(hereinafter "Linsley et al.")

Claims 2 and 8 have been canceled rendering the rejection of these claims moot. Claim 1 as amended recites a peptide that is 20 to 25 amino acids in length and comprises the sequence set forth in SEQ ID NO: 5 or SEQ ID NO: 6. Linsley et al. does not disclose, teach or suggest such peptides. Lacking such disclosure, Linsley et al does not anticipate claim 1. Thus, the rejection of claim 1, as amended, and claims 4 and 5, which depend from claim 1, should be withdrawn.

§ 103 Rejections

Claim 1 is rejected under 35 USC § 103(a) as being unpatentable over Freeman et al. (US Pat. Pub. :US2002/18727)(hereinafter "Freeman et al.") in view of Tezuka et al US Pat Pub. US 2004/0229790)(hereinafter "Tezuka et al.")

Claim 1 has been amended to recite a peptide mimetic that is 20-25 amino acids in length and that comprises the sequence set forth in SEQ. ID NO: 5 when the peptide mimetic comprises levorotary amino acids or the sequence set forth in SEQ ID NO: 6, when the peptide mimetic comprises dextrorotary amino acids. Neither Freeman et al nor Tezuka et al teach or suggest such a peptide. Accordingly, Freeman et al and Tezuka et al., either alone or combined, do not render the peptide mimetic of claim 1, as amended, obvious.

In view of the amendments and remarks, applicants submit that claims 1, 3-6, 10 and 13 are allowable, and that claims 17, 18, 20, 26 and 27 which are process claims that employ the peptide mimetic of claim 1, should be rejoined and allowed. Prompt notice of such allowance is respectfully requested. If the Examiner has any questions regarding the amendments, she is encouraged to call the undersigned, at (216) 622-8416.

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Respectfully submitted,

Pamela A. Docherty
Pamela A. Docherty, Reg. No. 40,591
(216) 622-8416